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Hong Kong Unrest and Implications for the Hang Seng Index

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Hong Kong Unrest and Implications for the Hang Seng Index

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Abstract

With the September 2014 'Umbrella Revolution' in Hong Kong, China faced one of the biggest political challenges since the Tiananmen Square events. Beijing's proposed electoral reform was perceived as a direct attack to democracy, and the ensuing protest triggered concerns amid local and international investors; the financial sector took the hardest hit, with stocks of companies exposed to the Hong Kong market facing significant losses. Volatility continued to increase to a seven-month high over worries that the student blockade in Hong Kong's streets could drag on for longer than expected. The econometric-based analysis in this paper looks at the implications of the protest and its spillover effect on the Hang Seng Index with a focus on sectoral performance. The ultimate objective is to gain a better understanding of the impact of the protests on different stocks and sectors with the goal of identifying market vulnerability and potential volatility patterns.

Keywords: Hong Kong Political Unrest, Hang Seng Index, Volatility, Spillover Effects and Growth.

JEL: F30, F65 and G15

1. Introduction

Hong Kong's recent political unrest or 'Umbrella Revolution' began in September 2014 with activists occupying the city's major intersections to demonstrate their disapproval of the decision made by the National People's Congress Standing Committee (NPCSC) of the People's Republic of China aimed at disallowing civil nominations and to limit public choices for the upcoming election. This unrest has been challenging regional and world financial markets due to fears of a potential escalation undermining ultimately Beijing's position.

Analysts and investors worried about the measures that could be taken by China's central government in attempting to control and neutralize the protests and about the direct implications these measures could have for financial stability in Hong Kong and further afield. The situation generated an increasing level of both uncertainty and ambiguity among investors, adding to the general economic uncertainty dominating the financial markets, to a weakened Euro-area and to the slowdown of China's economic growth. As a result, investors' uneasiness and anxiety could evolve into strategic decisions that could generate negative spillover effects affecting global economic growth and stability. In the specific case analysed here, investors could draw substantial amounts of capital from Hong Kong and reallocate them to more politically

stable countries and regions. This is because Hong Kong is considered as being a major economic player in the region, given it being the main gateway for trade into China's mainland, as well as having a key position as a banking hub for Chinese banks and companies that seek offshore funding. Hong Kong's role as a financial centre is critical to Chinese companies, even though this privileged position is under threat as China is adamant to develop other stock exchanges such as Shanghai (see for example Karreman and van der Knaap, 2009; Lai, 2012).

It is because of Hong Kong's current crucial role as a financial centre within China and further afield, that the impact of political events such as the Hong Kong 'Umbrella Revolution' ought to be analysed. Consequently, the objective of this study is to look into the Hong Kong stock market and its reaction to the 2014 political unrest. Stock markets are chosen as the focus of our analysis since they are a fundamental element of an economy. They have a vital role in mirroring the economic performance of key industrial sectors of the economy and of serving as a barometer of economic growth. Basic details of the Hang Seng Index behaviour during the 2014 protests in Hong Kong will be offered; furthermore, the way the different sectors reacted to the event, the way market dynamics operated, and the connections that exist between stock markets performance and political unrest will all be analysed here.

The ensuing section (Section 2) will present some background information on the China-Hong Kong relationship since 1997 as well as on stock markets' behaviour during times of unrest in the relevant literature. Section 3 will describe the methodology and data used, whereas section 4 will provide an analysis of the results. Some final remarks will be suggested in the concluding section.

2. The China-Hong Kong relationship and Stock Markets' Behaviour during times of Unrest

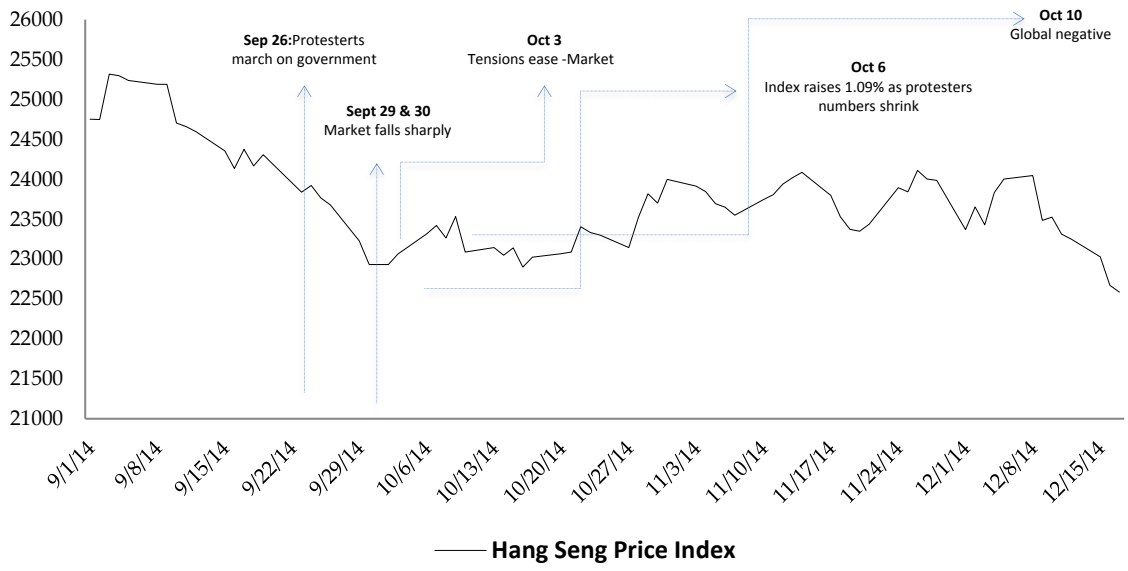
2.1. The China-Hong Kong relationship

Since the territory reverted from British to Chinese control in 1997, issues regarding Beijing's compliance with agreed policies have been a continuous source of discontent among Hong Kong citizens. This discontent became a reality when Beijing announced in September 2014 that it would vet candidates to run in the 2017 elections. Protesters perceived this decision as an attempt to regulate and intervene in the territory's democratic process.

This decision was taken in the background of serious corruption scandals affecting Chinese government officials and tarnishing Hong Kong's position in the region; as a result, tourism and retails sales dropped during the first two quarters of 2014 and growth rates slowed down. The September 2014 disruptions affected in a significant manner the holiday sales period (1st and 2nd of October). Consequently, weak results in the retail sector translated into a negative behaviour of their stocks on the Asian stock markets. At the peak of the protests, the Hang Seng Index experienced a significant volatility behaviour coupled with a downward trend affecting its performance since the

early days in September (Figure 1). The students' protests towards the end of the month contributed to heighten the Hang Seng decline, and the index eventually dropped by 1,073 points since the beginning of the month representing a decline of 4.34% from its peak. On the 26th of September, as the protests escalated with students marching towards government buildings, the Hang Seng suffered a sharp decline that brought the index below the 23,000 mark. An additional 2.59% drop was registered over the subsequent two days of trading, before the stock market was closed for the two-day holiday period at the beginning of October, when a flat rate was registered. Once the market opened again, on the 3rd of October, the index raised in the hope that a deal to appease the protesters was at reach. From this day onwards, the market registered a positive trend with small recoveries around 1% on a daily basis, a recovery that was truncated on the 10th of October by the release of negative news based on a pessimistic global outlook. Afterwards, the Hang Seng index just consolidated its downward trend and started to move towards the 22,500 mark, as reflected in figure 1. On the 15th of December, police forces cleared up all protesters' camps at Causeway Bay putting an end to the movement. On the 17th of December, the Hang Seng started to climb back and by the end of January 2015, the index was quite close to regaining the 25,000 mark that had been lost back in September 2014 when the students' protests had started. During 2015, the index remained quite strong moving above the 28,000 mark by the 28th of April. Afterwards, the index started to be quite unstable and moved below the 21,000 mark as per the latest records in the early days of January 2016.

Figure 1: Hang Seng Index Performance during the Umbrella Protests



Source: Financial Times (October 7, 2014)

2.2. Stock markets' behaviour during times of unrest

2.2.1. The Case of Hong Kong

The geographical location of Hong Kong has determined its political and economic history since the territory has been all along a natural geographic port for Guangdong province in Southeast China. Since its origins, Hong Kong has been closely linked to China through trade, allowing the region to connect with global markets. The territory underwent a rapid and successful process of industrialization from the 1950s and it has become one of the world's major international financial centres. Between 1978 and 1997, Hong Kong enjoyed sustainable growth, and it became the main provider of commercial and financial services in the region. The connection between Hong Kong and the People's Republic of China grew in a bidirectional way, as Hong Kong's firms started to move their operations to China's mainland economy so as to benefit from cheap labour and from other (fiscal) advantages. From 1997 onwards, - after its retrocession to the People's Republic of China -, main connections were developed in the tourism, financial and retail trade sectors. At that time, the Asian region was surrounded by intense uncertainty as the Asian Financial Crisis was unfolding, pushing Hong Kong into an economic recession mirrored by increased unemployment rates and by substantial declines in both output and prices. However, the relatively strong position of the Chinese economy led to an increase in trade and investment between Hong Kong and China, linking further their combined economic prospects.

2.2.2. Spillover Effects arising from Political Unrest

Stock markets performance is closely connected with the evolution of the global and local economy due to monetary and fiscal linkages. The existing literature has considered stock markets' reactions before and after elections, and the main findings seem to suggest that markets react differently based on the party of the president being elected (Rahaman *et al.*, 2013) and on the overall political position. As noted by Beyer *et al.* (2011) political gridlock and government instability have an impact on the type of monetary and fiscal policies implemented in a given country that end up affecting securities performance. Saad (2011, p.2) defines political instability as a situation where a country's political system is subjected to tensions that generate 'non-convenience scenarios' that ultimately undermine the economic stability in the country experiencing the situation of unrest. Political instability affects a country's risk premium and it encourages international investors to reassess their investment decisions and to be cautious regarding their risk exposure and their strategic allocation of capital. Initial political unrest can derive into a severe political crisis that could trigger military coups and general political violence that will end up eroding the economic development of a country. It follows that political instability represents potentially a major danger to an economy.

Political events and their impact on financial markets volatility have been analysed by Khalid and Rajaguru (2010). They find that domestic and international events have a short-run linkage to both the economy and to its financial markets. This relationship is enhanced by the level of integration shared between the domestic and global economies. The more integrated the goods, services and financial markets with the world economy, the bigger their exposure to macroeconomic shocks that lead to increased levels of stocks volatility. Political instability affects financial markets performance, and it eventually impacts upon the performance of the real economy thereby undermining its growth.

In the case of emerging markets such as those under investigation here, significant connections between political uncertainty and financial crises were found by Mei and Guo (2004). Markets volatility increased during times of political election and during transition periods, indicating that political uncertainty might be a contributing factor to financial crises with enhanced effects on emerging markets. An initial issue to consider is the impact that political uncertainty has on foreign direct investment. A climate dominated by a lack of both government stability and clarity with regard to policies would either deter investment or generate significant delays in investment that would end up being diverted to regions that offer more stability to investors. Another pertinent macroeconomic variable to analyse is the country's exchange rate: an unstable country would be more than likely affected by depreciation exacerbating investors' worries and making them more pessimistic regarding the overall investment environment. In this regard, the higher the political uncertainty, the more it would pay to investors to delay their investment decisions, and as a result the market demand for the local currency would diminish. Under this scenario, if the country's position weakens enough, the situation could leave way to potential speculative attacks that could spread to the real economy prompting a situation that undermines the country's international credibility. In addition, it has been reported that high levels of political corruption might also affect the country's economic efficiency, but these do not seem to be a major force that leads towards a serious crisis (Mei and Guo, 2004).

Kim and Mei (2001) identified jump return dates associated with political events through the analysis of volatility behaviour linked to political announcements. Their findings indicate that political developments in Hong Kong have a significant impact on both its stock market volatility and returns. The main reason behind this type of behaviour can be found in the government's decisions regarding fiscal and monetary policies that are heavily influenced by a change of government that has a direct impact on markets' behaviour and performance. The authors also found that the impact of news linked to political events is asymmetric with bad news having a greater volatility effect than good news. In addition, returns experienced the largest variations when major political news were released.

Roe and Siegel (2011) argue that political instability strongly affects overall economic developments. What they suggest is that political unrest is a vehicle of instability that ultimately causes major disruptions in the economic and financial development of a country. The authors conclude that political instability strongly impedes economic development and that financial development is found to be closely linked with economic development. Consequently, a primary channel from political stability towards economic development could well run from a sound financial system that will generate positive spillover effects to the rest of the economy. Analysing political instability and its impact on the financial system is therefore fundamental as this helps understand and explain the main differences between countries' levels of economic and financial development.

The existing research concludes that institutional investors should take into account markets behaviour during times of political unrest in order to design and diversify their investment portfolios and optimise their risk management strategies. These initial findings lead us to argue that the Hong Kong index and its sectoral performance would

be negatively affected as a result of the Umbrella protests and that investors will be looking at their portfolios to ensure that they are able to minimise their risk exposure to this market. In our next section, we offer some details of our selected research sample and methodology that help us illustrate how the Hong Kong protests did indeed impact upon the Hang Seng index and its related industrial sectors.

3. Research Framework

3.2. Research Sample

Our research sample spans from December 2011 to December 2014 with a focus on the weeks during which the Hong Kong protests took place (*i.e.* between the 25th of September to the 10th of October 2014). The selected sample allowed us to develop a volatility framework based on the estimation of a GARCH(1, 1) model. We gathered daily data from Thomson's Reuters DataStream for the selected period to ensure that an optimal number of observations was available so as to minimise problems with the GARCH estimation that requires a minimum of 500 observations. A total of 785 observations were thus collected rendering the sample appropriate to proceed with the implementation of the selected volatility framework. In addition, we split the sample into a micro-period that considered the time-frame of the protests and that allowed us outline the behaviour of the Hang Seng Index and its sectors at the time when the protests were at their peak level (25th Sept. to 11th Oct. 2014).

3.3. Research Methodology

Our research methodology is supported by the analysis of basic descriptive statistics for the Hang Seng Index and its connected industrial sectors that help us to provide a straightforward discussion of market performance over a three-year period and during the weeks when the social unrest in Hong was at its highest level. In addition, we developed a traditional and basic volatility framework to model volatility patterns over the three-year period.

The analysis started with basic econometric testing to ensure that our series comply with stationarity properties, with the use of the Augmented Dickey Fuller and the Phillips-Perron tests. We also developed an appropriate Vector Autoregressive Framework to ensure that the optimal number of lags where identified. We continued with the identification of ARCH effects on our series that confirmed the existence of heteroskedastic behavior. Finally, the volatility model selected for our analysis was the well-known and generally accepted approach for testing volatility, the Generalised Autoregressive Conditional Heteroskedasticity (GARCH) model introduced by Bollerslev (1986), with the basic GARCH(1, 1) being implemented. Bollerslev's generalised ARCH model, that is GARCH (p, q), is outlined below:

$$y_t = \alpha + \beta' x_t + \varepsilon_t \quad (1)$$

where $\varepsilon_t | \Omega_t \sim$ iid N(0, h_t)

$$h_t = \omega + \sum_{i=1}^{p} \alpha_i h_{t-i} + \sum_{j=1}^{q} \beta_j \varepsilon_{t-j}^2 \quad (2)$$

This states that the value of the variance scaling parameter h_t depends on both past values of the shocks, which are captured by the lagged squared residual terms, and on the past values of itself, which are captured by lagged h_t terms. The simplest form of the GARCH (p, q) model is the GARCH (1, 1) that was considered an optimal approach to support this study. The variance equation is defined below as:

$$h_t = \omega + \alpha_1 h_{t-1} + \beta_1 \varepsilon_{t-1}^2 \quad (3)$$

where ω denotes the long run variance, α is the coefficient of the difference between today's variance and previous periods' values, and β is the coefficient between today's variance and previous time periods' variance. In other words, ω denotes the long run volatility, whereas the α coefficient measures volatility pikes, and the β coefficient looks after volatility persistence effects.

4. Empirical Findings

We selected two main descriptors to identify Hong Kong's stock performance over a three-year period (Table 1). On average, only the energy and materials sector showed negative returns, while the Hang Seng index and returns for the remaining sectors registered positive values. In terms of uncertainty, we found that the information technology sector, industries, energy and the services sector were the ones subject to major variations, while the rest of the sectors were sticking to the Hang Seng Index performance.

Our findings connect with the views put forward by Kim and Mei (2001) who found a close relationship between political risk in Hong Kong and market volatility. Our initial findings illustrate how political developments in Hong Kong are having a significant impact on market volatility and stock returns, and how certain sectors of the economy seem to be more affected than others. The situation is clearly reflected by pronounced losses faced during the weeks of the protests with the services sector - especially those activities connected to tourism such as retail trade - having been greatly impacted upon during the holiday period.

Table 1: –Hang Seng Stock Market Returns (mean and standard deviation)

Time Period	**December 2011 - December 2014 (783 observations)**	
Index	**Mean**	**SD**
Hang Seng	0.028	0.94
Sectors	**Mean**	**SD**
Conglomerates	0.039	0.97
Consumer Goods	0.0058	0.94
Energy	**-0.034**	**1.25**
Financial	0.034	1.04

Industries	0.011	**1.33**
Information Technology	0.111	**1.45**
Materials	**-0.027**	**1.29**
Property and Constructions	0.031	**1.15**
Services	0.02	**1.28**
Telecommunications	0.013	**1.12**
Utilities	0.019	0.74

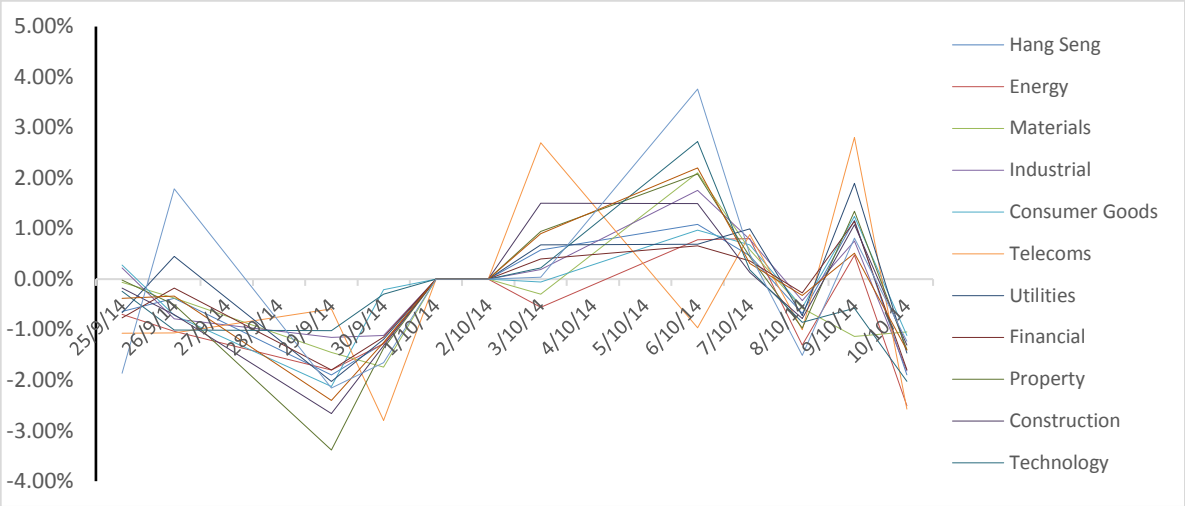
Table 2: Hang Seng and Sector Price Changes (Sep 25 to Oct 10 2014)

Date	Sep 25	Sep 26	Sep 29	Sep 30	Oct 1*	Oct 2*	Oct 3	Oct 6	Oct 7	Oct 8	Oct 9	Oct 10
Index												
Hang Seng	-0.64%	-0.38%	**-1.90%**	-1.28%	0.00%	0.00%	0.57%	1.09%	0.46%	-0.68%	1.17%	**-1.90%**
Sectors												
Energy	-0.70%	-1.03%	**-1.80%**	-1.28%	0.00%	0.00%	-0.56%	0.78%	0.80%	-1.31%	0.48%	**-2.51%**
Materials	-0.06%	-0.38%	**-1.45%**	-1.74%	0.00%	0.00%	-0.30%	2.11%	0.58%	-0.57%	-1.13%	**-1.05%**
Industrial	0.22%	-0.78%	**-1.15%**	-1.11%	0.00%	0.00%	0.19%	**1.76%**	0.78%	-0.43%	0.75%	**-1.82%**
Consumer Goods	0.28%	-0.72%	**-2.13%**	-0.21%	0.00%	0.00%	-0.06%	0.97%	0.68%	-0.56%	1.24%	**-1.12%**
Telecoms	-1.07%	-1.07%	**-0.59%**	**-2.80%**	0.00%	0.00%	2.70%	-0.96%	0.88%	-1.00%	2.80%	**-2.57%**
Utilities	-0.67%	0.45%	**-2.03%**	-1.19%	0.00%	0.00%	0.68%	0.69%	0.99%	-0.72%	1.90%	**-1.47%**
Financial	-0.77%	-0.18%	**-1.80%**	-1.15%	0.00%	0.00%	0.40%	0.66%	0.36%	-0.27%	1.14%	**-1.80%**
Property	-0.02%	-0.50%	**-3.38%**	-1.37%	0.00%	0.00%	0.94%	2.08%	0.45%	-0.97%	1.35%	**-1.40%**
Construction	-0.18%	-0.70%	**-2.66%**	-1.32%	0.00%	0.00%	1.50%	1.49%	0.13%	-0.78%	1.07%	**-1.30%**
Technology	-0.24%	-1.01%	**-1.02%**	-0.30%	0.00%	0.00%	0.22%	2.72%	0.19%	-0.86%	-0.58%	**-2.02%**
Conglomerates	-0.38%	-0.34%	**-2.40%**	-1.26%	0.00%	0.00%	0.90%	2.20%	0.31%	-0.32%	0.51%	**-1.41%**
Services	-1.86%	1.79%	**-2.16%**	-1.65%	0.00%	0.00%	0.04%	3.76%	0.49%	-1.51%	0.81%	**-1.23%**

*Flat – Market Closed for two days holidays (Source: DataStream)

Table 2 and Figure 2 depict market and sectoral performance over the twelve critical days of the period. Our goal is to illustrate prices changes during the week when the Hong Kong protests were at their highest level. As can be seen from Table 2, the Hang Seng index experienced losses from September 25 to September 30, with the highest change recorded on the 29th of September when the protests where escalating, as students marched towards government buildings. The markets faced a respite due to their closure during the early October holiday period which was followed by some tranquillity (on the 3rd of October) as market tensions eased given the expectation that a deal was close. On the 10th of October, the market dropped again amidst a pessimistic outlook for the global economy. The sectoral analysis is in line with the trend exhibited by the Index, registering losses two days before the marches took place and showing sharp declines in every sector during the critical day of the 29th of September. The sectors that were most affected by the declines were: property, construction, conglomerates[i], retail trade, telecommunications and the financial sectors. Over the twelve days of protests, the telecommunications and financial sectors exhibited substantial swings.

Figure 2: Hang Seng Index and Sectoral Changes



Source: Authors' own elaboration, 2015.

Table 3: Hang Seng Index and Sectors Volatility

Coefficients	**Hang Seng**	**Conglomerates**	**Consumer Goods**	**Energy**	**Financial**	**Industries**
Ω	n/a*	0.028	0.01	0.04	n/a*	0.005
A	n/a*	0.0316	0.019	0.032	n/a*	0.036
B	n/a*	0.938	0.967	0.941	n/a*	0.96
α+β	n/a*	0.9696	0.986	0.973	n/a*	0.996
Days	n/a*	22	49	25	n/a*	173
Coefficients	**Info Tech**	**Materials**	**Prop. and Const**	**Services**	**Telecom.**	**Utilities**
Ω	n/a*	0.023	n/a*	0.089	0.505	0.032
A	n/a*	0.042	n/a*	0.045	0.053	0.057
B	n/a*	0.944	n/a*	0.9	0.908	0.885
α+β	n/a*	0.986	n/a*	0.945	0.961	0.942
Days	n/a*	49	n/a*	12	17	12

*n/a – the results from the GARCH(1,1) were non stationary in variance.

Table 3 shows the volatility analysis. The GARCH model did not capture the Hang Seng, Financial, Technology, Property and Construction sectors behaviour, since the results were non-stationary in variance. In spite of these restrictions, the remaining results clearly indicated that market volatility was short-lived for the services and utilities sector with a persistence of 12 days; the longest volatility persistence was registered by the industrial sector (up to 173 days). We also computed individual patterns of volatility and plotted them (see the Appendix). The results from the charts indicate clearly that the Hang Seng index was quite volatile during the week of the protests, followed by high uncertainty in the industrial, retail, telecommunications, utilities, financial, technology and services sectors. Overall, all the sectors were impacted upon, with significant movements over the period of the protests. Consequently, our results do align with the reviewed literature, as we found evidence

of significant connections between political instability and negative performance of the country's stock market, as reflected by the study of the Hong Kong stock market.

5. Critical Assessment of the Findings and Policy Implications

The 2014 demonstrations in Hong Kong revealed the citizens' dissatisfaction with China's involvement and intervention in the territory's democratic process, raising major concerns among the international community and its pool of investors in Greater China. There were some concerns that Hong Kong would be destabilised and that its position as a major financial centre would suffer as a result. However, and according to our analysis, the events that disturbed the territory and that unfolded over a few weeks seem to have been short-lived. The most prominent outcome is that Hong Kong's stock market has not been destabilised by the demonstrations. The Hang Seng index has exhibited a strong performance during the first month of the year 2015; it has been gaining back in terms of confidence and it has been recovering the positions that it had lost during the times of unrest. However, Mainland China's long-term plan to allow Shanghai to compete with Hong Kong and Singapore as a dominant financial market in the region denotes a cautious approach from the part of the Chinese authorities. Even though the Chinese authorities would deny that the creation and development of the financial centre in Shanghai has the objective to overtake Hong Kong's privileged position as a major world financial centre in the region, it is clear that the boost of Shanghai will add rivalry in the region and that it will end up undermining Hong Kong's position in the regional and global markets. This is to say that from a longer-term perspective, and in the eyes of the Chinese authorities, the Hong-Kong financial centre may not be seen as being very stable.

6. Conclusions

The Hong Kong protests towards the end of 2014 took place at a very delicate time for the territory's economy since it was already struggling with slow economic growth spurred by the decrease in spending from Chinese visitors. The retail sector in Hong Kong suffered sharp declines during the second and third quarter of 2014, as China's economic expansion was constrained by the country's anticorruption campaign that reduced the number of visitors from mainland China ready to spend on jewellery and luxury items. As Hong-Kong was preparing to celebrate its National Day on the 1st of October, marking the beginning of its 'Golden Week' holiday and attracting many tourists from Mainland China, the protests created a general sense of uncertainty that discouraged visitors. They also impacted upon international investors' sentiment and they brought to the fore the existing tensions between Hong Kong and Mainland China.

Using a volatility framework based on the basic GARCH (1,1) model for the period Dec. 2011 to Dec. 2014, our research confirms the importance of political stability to the investors community that are ready to shift their capital to more secure regions if they see their interests being threatened. What the analysis shows is that although the disturbances were short-lived, all sectors were impacted upon. With political unrest,

investors reassess their investment plans. The protests brought evidence that the privileged position that the territory had enjoyed over the years could easily be undermined, as these happened at a time when the mainland government was able to boost its own stock markets through adequate policies such as the large October 2008 stimulus package. Pro-democracy clashes between protesters and police in the city's central business area of Hong Kong did hold back Hong Kong's equities, while Shanghai's shares were boosted through the Chinese stimulus package. Consequently, it might be that, in a longer-term perspective, the 2014 Hong-Kong protests reinforced Beijing's plan to allow Shanghai to become the major financial centre of China and of the region.

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8. Appendix

Hang Seng Index and its Sectors – Volatility Patterns

Figure 2

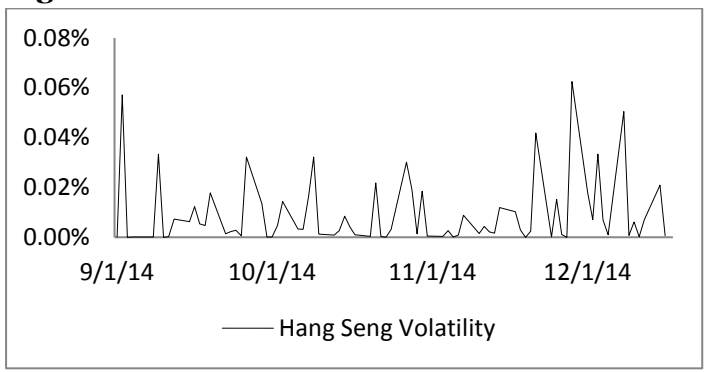


Figure 3

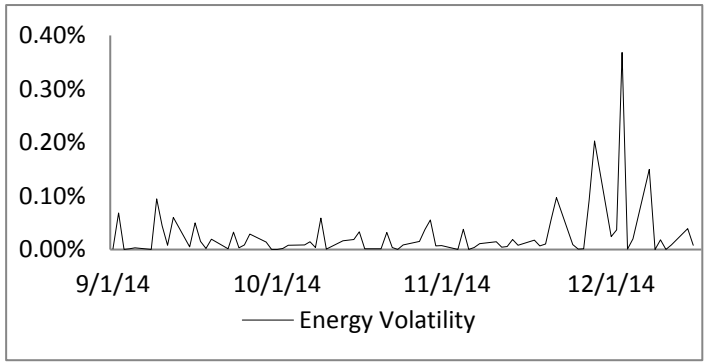


Figure 4

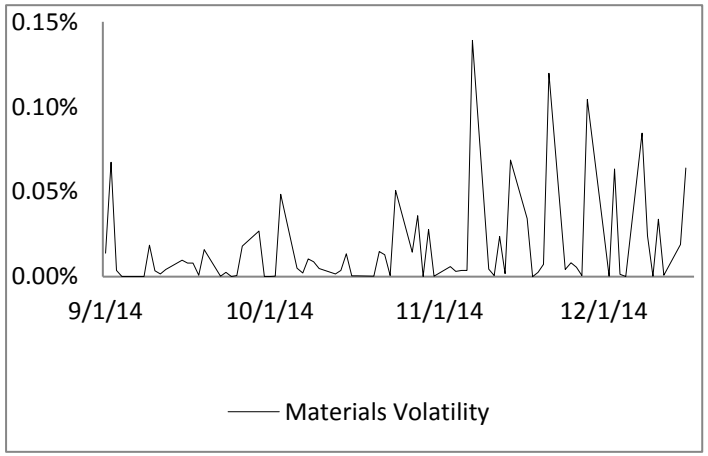


Figure 5

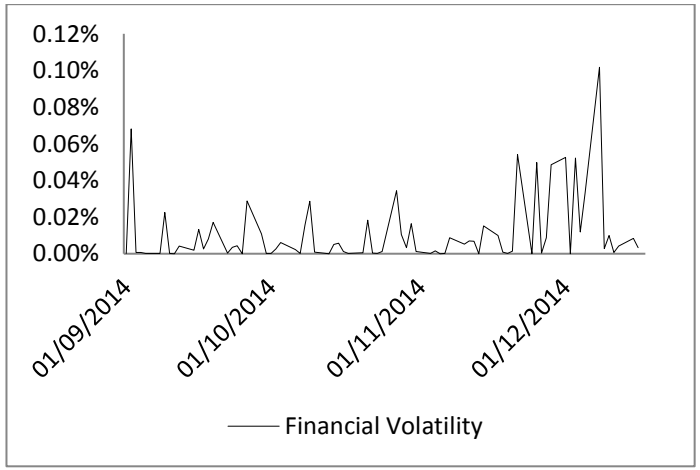


Figure 6

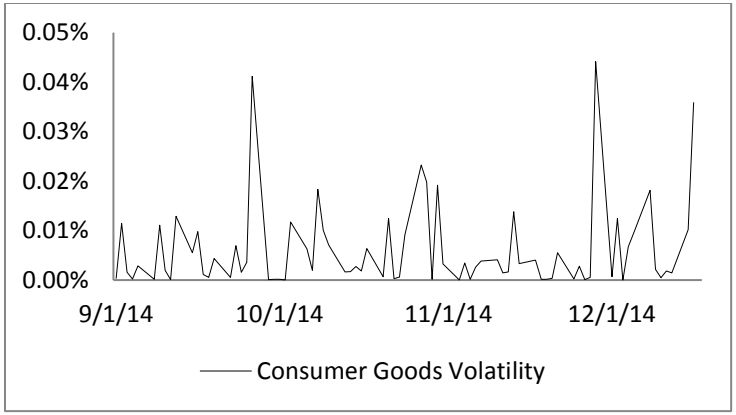


Figure 7

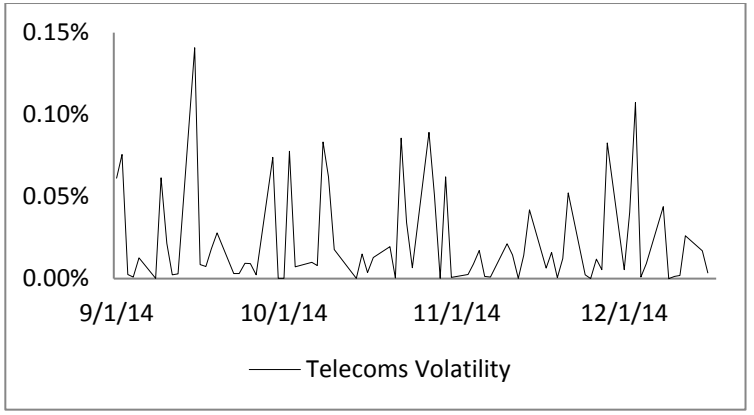


Figure 8

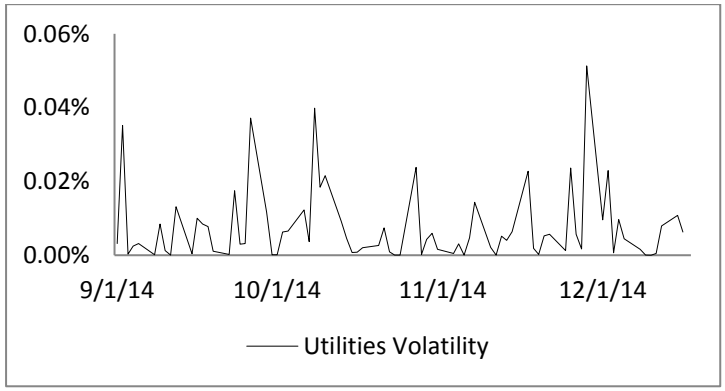


Figure 9

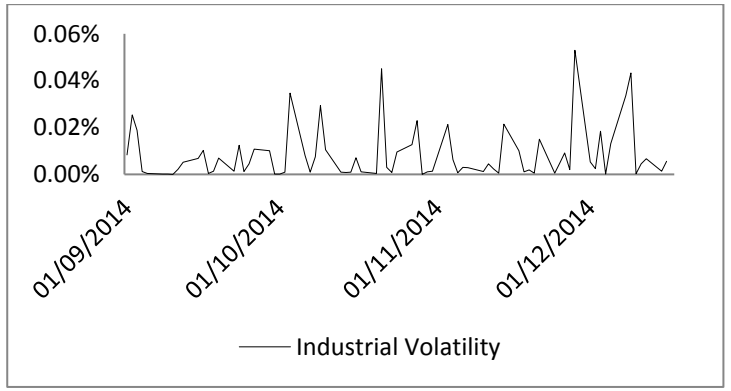


Figure 10

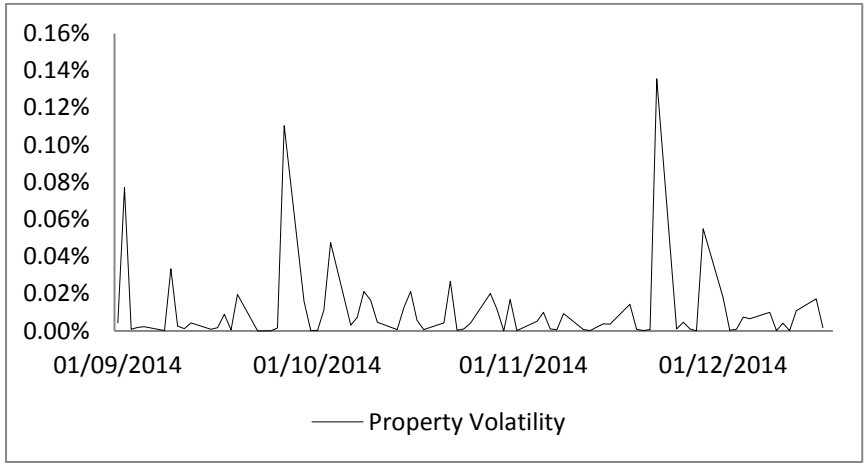


Figure 11

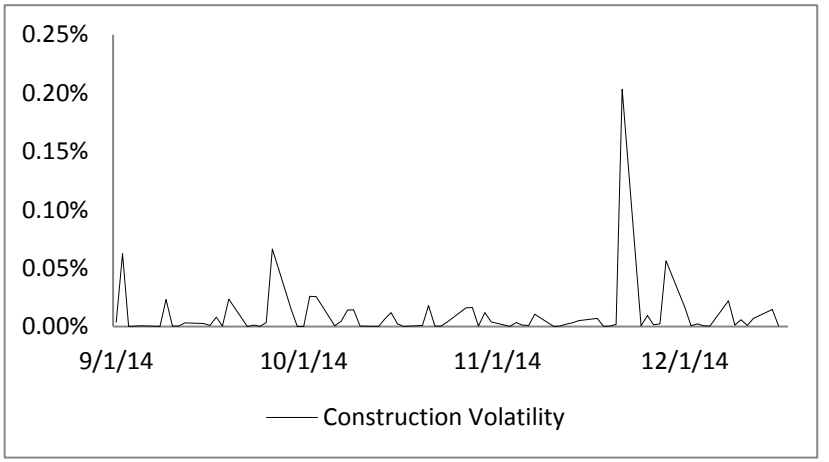


Figure 12

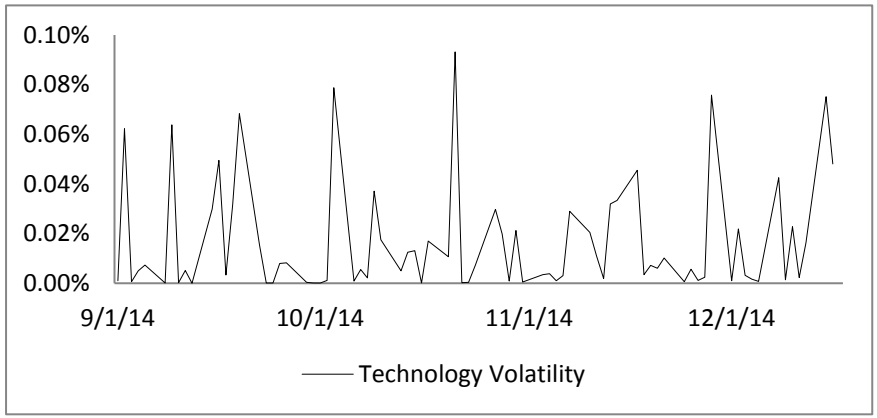


Figure 13

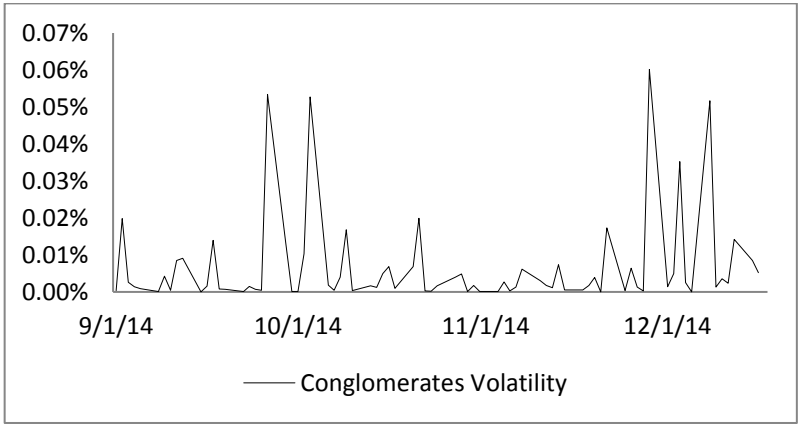
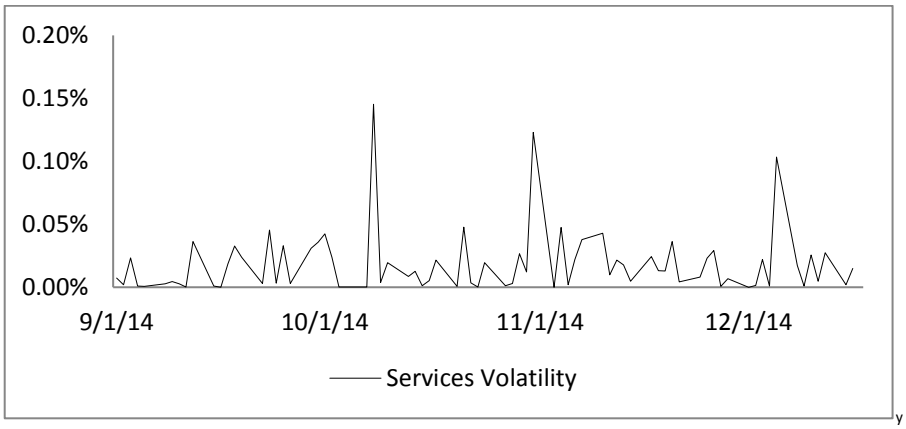


Figure 14



[i] This category encompasses companies engaged in three or more businesses classified in different industries with each business contributing more than 10 per cent of the total turnover.